

84 - NUTRITIONAL PROFILE OF LEARNERS, THE AGE OF 07 TO 10 YEARS OF AGE, THE MUNICIPAL NETWORK OF PUBLIC EDUCATION OF THE CITY OF MARABÁ-PA

NEY CALANDRINI DE AZEVEDO,
JOSENALDO MENDES DE SOUZA JÚNIOR,
ROSEANE MONTEIRO DOS SANTOS,
MÁRIO DE NAZARÉ MOREIRA CARDOSO, RICARDO FIGUEIREDO PINTO
UNIVERSIDADE CASTELO BRANCO, RIO DE JANEIRO – RJ/BRASIL
ncalandrini@hotmail.com

INTRODUCTION

The influence of nutrition on health of the individual is measured by assessing the nutritional status; this, in turn, is defined as the degree to which the physiological need for nutrients of the individual being served through the food they are eating, (equilibrium between intake and expenditure or the need for nutrients) (MONTEIRO, 1984). So there is a perceived need for a proper diet and exercise administration compatible with the needs of an organization under construction, which contributes effectively to developing the full potential of genetically determined (SCHIMITD, 2003, p. 1122).

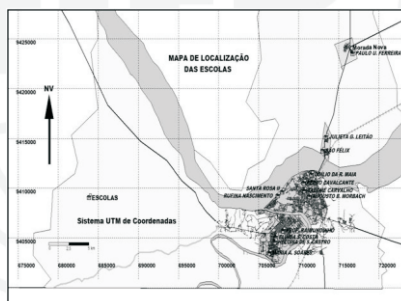
The growth and development of children are determined by five factors: genetic, endocrine, nervous, environmental and nutritional value, it is appropriately related to each other, permit the introduction of more complex functions (MARCONDES, 1994). In this sense, Negrine (1987) says that nutritional factors are directly linked to the balance, malnutrition restricts and limits the more complex functions of the body.

Considering the current economic policy in Brazil, you can make a pessimistic outlook in relation to dietary patterns of families. According Filun (1984), the body can only grow and develop through the same regular administration of nutrients that make up the raw material for plastic reconstruction of tissues, organs and bodily structures. To Negrine (1987), children malnourished, hungry, who have an insufficient daily protein intake, are also likely to learn, but beyond their own limitations and learn at a pace slower than the well-nourished children, who have a normal nutritional status. Therefore, the school lunch is an important meal of public school students in Brazil and in many cases is the only daily meal of the student and should therefore be as balanced as possible. This study was designed to assess the nutritional status of students from 7-10 years of public schools in Marabá through the association of anthropometric indicators dependent on age and body composition of each child.

METHODS

The study was conducted in 13 public schools located in five townships in the city of Marabá-PA (see Figure 1 which shows the location of schools), characterized by being a descriptive evaluation. The children were evaluated by classifying Wateelow (1977), whereas undernourished who present adequacy of less than 80 % and 90 % for weight for height for age and height, respectively. The anthropometric reference design was proposed by the NCHS (2000).

Figure 1: Location of the 13 schools in 5 urban centers of Marabá.



Source: City of Marabá.

SAMPLE

The sample was defined by children 7-10 years enrolled in the regular education council of the five urban centers: New Town, Pioneer Marabá, Marabá New, St. Felix and House New. Participants totaled 2505, which, spontaneously, parents and guardians agreed to sign an Informed consent. This study was approved and carried forward by the Ethics Committee of the University of Castelo Branco.

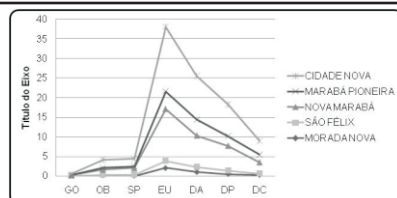
EXPERIMENTAL PROCEDURES

To check body mass and height were used digital scale G-TECH Flat Model II with a capacity of 150kg division and 100 grams and measuring tape to mark Classic Tools to 2 meters and divided into cm and mm, and the landmark (0) zero insertion in the soil to the wall. Data analysis was performed using descriptive statistics in Epi Info 6.0 and for this, we used units of weight, height and age, were computed for the Program Assessment and Nutritional Status in Pediatrics (PED, 2000), following criteria suggested by Wateelow (1977), with the reference standard curve of the NCHS. After analyzing the results were generated position in categories thus defining the nutritional profile and: Great Obese-GO, OB, Obese, Overweight-SP, Eutrophic-EU, Malnourished now-DA, stunted Malnourished-DP, chronic malnourished-DC.

RESULTS

The following status was observed for the 5 townships in the city of Marabá: 14 (0.73%) of students are classified as extremely obese (GO), 104 (4.76%) are obese (OB), 112 (4, 58%) is overweight (SP), 953 (37.73%) are within the normal range, so they are considered according to the classification in Eutrophic (EU), 639 (25.46%) are with malnutrition (DA), 458 (18.59%) are stunted (SD) and 225 (8.15%) is chronic malnutrition (DC). However a more accurate profile can be seen in Figure 2.

Figure 2: Profile of School Nutrition in five townships of Marabá.



Source: Field Research.

DISCUSSION

We evaluated 13 public schools located in urban centers of the city of Marabá. In general terms we did not find any data unexplained. The population of urban areas studied is, by the very conditions of life, more exposed to dietary inadequacy, and possibly be plundered by concomitant parasitic diseases. While appearing at higher percentages than obesity, malnutrition should be a matter of concern (SILVERTHORNE, 2003). In Brazil, obesity has received little attention, perhaps because malnutrition is a serious problem, particularly for the poorest regions of the country, such as the Amazon, because in many cases the school lunch is the only daily meal of the student, and from this fact highlights the importance of a balanced diet to be offered in public school lunches in Brazil. As Brazil has in its statistics on morbidity typical conditions of underdevelopment, along with illnesses of capitalist development, it is important that studies of the nutritional assessment of populations present the results of obesity, normal weight and malnutrition separate and not bound in the category of normal. Even more so because it recognized the importance of the growth phase in determining the total number of adipocytes (WILMORE & COSTILL, 1999). In doing so, we could assemble a better collection of information related to malnutrition. The results of this research are critical, but not alarming when compared to other studies such as the ENDEF (ALBUQUERQUE, 1984) and nutritional survey conducted in the city of Marabá, where he noted that research participants are at the eutrophic, ie, in the normal range, the results corroborate with findings in other studies showing that in the Amazon region has a somewhat high value eutrophic as a consequence of an indigenous heritage food (BUSTOS ET AL. 1995, MARTINS & MENEZES, 1994).

CONCLUSION

Although a significant percentage of schoolchildren (37.73%) is concentrated within normal limits, ie eutrophic we must take into consideration the high rates submitted to malnutrition, stunted growth and malnutrition which together accounted for 52, 2%, and the students with Overweight, Obesity and Overweight Great totaled only 10.07%. Eating habits are inadequate, observing a low intake of food of nutritional value and low consumption of vegetables, fruits and vegetables, and these habits must be changed to not cause future complications. It is important to dietary education with students and guide parents and teachers about healthy eating and balanced. Many children have bad eating habits that are rooted in the family. Therefore, nutrition education is very important both for students and for parents and family, because, for a child to acquire good eating habits and develop healthy, you need to involve the whole family, as the child needs examples and often learn by imitation. Given this fact is important to fostering public policy education and health related food right.

REFERENCES

- ALBUQUERQUE, M. C. W. **Nutritional survey in Jauru-MT**. University, Cuiabá, 1984.
- BUSTOS, M. P.; AMIGO, C. H.; LETELIER, P.; JORQUERA, E. **Deficit Growth in Indian school of origin**. Rev Chil Nutr 1995; 23:42-7.
- FILUN, V. P. **Fundamentals of Youth Sports**. Moscow: Ed I, 1984.
- MARCONDES, E. **Child development: Biological Development: Growth - RJ**, Brazilian Society of Pediatrics, 1994.
- MARTINS, S. J. Menezes, R. C. **Evolution of the nutritional status of children under 5 years in Indian villages of the tribe Parakanã, eastern Amazonia, Brazil (1989-1991)**. Journal of Public Health 1994, 28:1-8.
- MONTEIRO, C. A. **Anthropometric criteria for the diagnosis of malnutrition programs in child care**. Journal of Public Health., SP, 18: 209-17, 1984.
- NATIONAL CENTER FOR HEALTH STATISTICS. **Centers for Disease Control and Prevention**. Available at: <http://www.cdc.gov/growthcharts>. Accessed June 23, 2000.
- NEGRIN, A. S. **Psychomotor coordination and its applications**. Porto Alegre: Copyright, 1987.
- PED - Assessment Program Nutritional Status in Pediatrics. Center for Health Informatics, Scholar Paulist of Medicine. 2000.
- SCHMIDT, M.I; DUNCAN, B. B. **Diabesity: an inflammatory metabolic condition**. Clin Chem Lab Med 2003; 41 (9):1120-1130.
- SILVERTHORNE, D. U. **Human Physiology: An Integrated Approach**. Austin, USA University of Texas. 2nd edition. Manole. 2003.
- WATELOW, J. C. **The presentation and use of height and weight data for comparing the nutritional sums of groups of children under the age of 10 months**. Bull. Wild Hlth Org, 55: 489-98. 1977.
- WILMORE, J. H, COSTILLA, D. L. **Physiology of Sport and Exercise**. São Paulo. Manole. 1999.

ADDRESS: RUA AQUILINO SANCHES, 75
 BAIRRO: ALVORADA - MARABÁ/PARÁ/BRASIL
 CEP: 68.502-350 - PHONE: (94) 8111-0189/8802-0787.

NUTRITIONAL PROFILE OF LEARNERS WITH 07 TO 10 YEARS OF AGE IN THE MUNICIPAL NETWORK OF PUBLIC EDUCATION OF THE CITY OF MARABÁ-PA.

ABSTRACT

Introduction: The school lunch is an important meal of public school students in Brazil, this situation is worsened in the poorest regions of Brazil and the Amazon region, because in many cases is the only daily meal for the student; studies that actualize the assessment nutritional status are of great value, highlighting the importance of a balanced diet to be offered in public school lunches in Brazil. Objective: To evaluate the nutritional status of students from 7-10 years of public schools in Marabá. Methods: The study was conducted with 2505 students from 13 public schools in Marabá, in 5 cities (New Address-MN, SF-San Felix, NM-New Marabá, Marabá Pioneer-MP, New City, NC). The children were evaluated by classifying Wateelow (1977). Data analysis was performed using the Epi Info 6.0 and Program Assessment and Nutritional Status in Pediatrics (PED, 2000). Results and Discussion: The nutritional profile to be established was the Great Obese-GO, OB, Obese, Overweight-SP, Eutrophic-EU, Malnourished now-DA stunted Malnourished-DP, chronic malnourished-DC. GO was not detected in MN, SF and MP, with only

incidence of 0.24%, 0.31% and NM-CN. OB were observed: 0.15%-MN, SF-0.12%, 1.32%-NM, MP-0.47% and 2.08%-CN. SP: NM-0.04%, 0.28%-SF-NM 1.72%, 0.44%-MP and 2%-CN. U.S.: found 2.08%-MN, 1.8%-SF-NM 13.17%, 4.55%, and 16.45% MP-CN. DA: 1-MN, 1.32%-SF-NM 7.98%, 4.11%-MP and 11.1%-CN. SD: 0.52%-MN, 0.84%-SF-NM 6.35%, 2.48%-MP and 8.1%-CN. DC: 0.24%-MN, 0.4%-SF-NM 2.87%, 1.92%, 3.55% MP and-CN. Conclusion: Eating habits are inadequate, observing a low intake of food of nutritional value and low consumption of vegetables, fruits and vegetables, and these habits must be changed to not cause future complications, whereas 52.2% of students are in groups of malnutrition (DA, DP, DC), before this fact is important to emphasize the public policies on education and health related to correct nutrition.

KEYWORDS: Nutritional profile, obesity and malnutrition.

PROFIL NUTRITIONNEL DES APPRENANTS, L'AGE DE 07 À 10 ANS, LE RÉSEAU MUNICIPAL DE L'ENSEIGNEMENT PUBLIC DE LA VILLE DE MARABA-PA.

RESUMÉ

Introduction: La restauration scolaire est un repas important d'élèves des écoles publiques au Brésil, cette situation est aggravée dans les régions les plus pauvres du Brésil et de la région amazonienne, parce que dans de nombreux cas, est le seul repas par jour pour les étudiants, les études qui actualisent l'évaluation l'état nutritionnel sont de grande valeur, en soulignant l'importance d'une alimentation équilibrée pour être offert en repas à l'école publique au Brésil. Objectif: évaluer l'état nutritionnel des élèves de 7-10 ans des écoles publiques à Maraba. Méthodes: L'étude a été menée avec 2505 étudiants de 13 écoles publiques de Maraba, dans 5 grandes villes (New Adresse-MN, SF-San Feliz, NM-New Maraba, Maraba Pioneer-MP, New City, NC). Les enfants ont été évalués en classant Warterlow (1977). L'analyse des données a été effectuée en utilisant les Epi Info 6.0 et au Programme d'évaluation et état nutritionnel en pédiatrie (PED, 2000). Résultats et Discussion: Le profil nutritionnel d'être établie est la Obeso Grande-GO, OB, Obésité, surpoids-SP, eutrophes-UE, mal nourris maintenant-DA-DP rabougris, mal nourris, DC. GO n'a pas été détecté dans MN, SF et député, avec l'incidence que de 0,24%, 0,31% et NM-CN. OB ont été observés: 0,15%-MN, SF-0.12%, 1.32%-NM, MP-0.47% et 2.08%-CN. SP: NM-0,04%, 0,28%-SF-NM 1,72%, 0,44% et 2% MP-CN. US: trouvé 2,08%-MN, 1,8%-SF-NM 13,17%, 4,55% et 16,45% MP-CN. DA: 1-MN%, 1,32%-SF-NM 7,98%, 4,11% et 11,1% MP-CN. SD: 0,52%-MN, 0,84%-SF-NM 6,35%, 2,48% et 8,1% MP-CN. DC: 0,24%-MN, 0,4%-SF-NM 2,87%, 1,92%, 3,55% MP et-CN. Conclusion: Les habitudes alimentaires sont insuffisantes, l'observation d'un faible apport d'aliments de valeur nutritionnelle et une faible consommation de légumes, de fruits et légumes, et ces habitudes doivent être changées pour cause pas de complications à l'avenir, alors que 52,2% des étudiants sont dans les groupes de la malnutrition (DA, DP, DC), avant que ce fait est important de souligner les politiques publiques d'éducation et de santé liées à la nutrition correcte.

MOTS-CLÉS: profil nutritionnel, l'obésité et la malnutrition.

PERFIL NUTRICIONAL DE LOS EDUCANDOSV CON 07 A 10 AÑOS DE EDAD, LA RED MUNICIPAL DE EDUCACIÓN PÚBLICA DE LA CIUDAD DE MARABA-PA.

RESUMEN

Introducción: El almuerzo de la escuela es una comida importante de estudiantes de escuelas públicas en Brasil, esta situación se agrava en las regiones más pobres del Brasil y la región amazónica, porque en muchos casos es la única comida diaria para el estudiante, estudios que actualizan la evaluación de el estado nutricional son de gran valor, destacando la importancia de una dieta equilibrada que se ofrecerá en los almuerzos de las escuelas públicas en Brasil. Objetivo: Evaluar el estado nutricional de los estudiantes de 7-10 años de escuelas públicas en Maraba. Métodos: El estudio se realizó con 2.505 estudiantes de 13 escuelas públicas en Marabá, en 5 ciudades (Nueva Dirección-MN, SF-San Feliz, NM-Nueva Maraba, Marabá Pioneer-MP, New City, NC). Los niños fueron evaluados mediante la clasificación de Warterlow (1977). Los datos fueron analizados utilizando el Epi Info 6.0 y Programa de Evaluación y Estado Nutricional en Pediatría (PED, 2000). Resultados y Discusión: El perfil nutricional que se estableció fue el Gran-GO Obeso, OB, obesos, el sobrepeso-SP, eutróficas-UE, padecen desnutrición, ahora-DA-DP raquícticos, desnutridos, DC. GO no fue detectado en MN, SF y MP, con una incidencia de sólo 0,24%, 0,31% y NM-CN. OB se han observado: 0,15%-MN, SF-0,12%, 1,32%-NM, MP-0,47% y 2,08%-CN. SP: NM-0,04%, 0,28%-SF-NM 1,72%, 0,44%-MP y el 2%-CN. EE.UU.: se encuentra 2,08% Mn, 1,8%-SF-NM 13,17%, 4,55% y 16,45% MP-CN. DA: 1-MN%, 1,32%-SF-NM 7,98%, 4,11% y el 11,1% MP-CN. SD: 0,52% Mn, 0,84%-SF-NM 6,35%, 2,48% y el 8,1% MP-CN. DC: 0,24% Mn, 0,4%-SF-NM 2,87%, 1,92%, 3,55% y MP-CN. Conclusión: Los hábitos alimentarios son insuficientes, observando una baja ingesta de alimentos de valor nutritivo y bajo consumo de verduras, frutas y verduras, y estos hábitos debe cambiar para no causar complicaciones futuro, mientras que el 52,2% de los estudiantes son en los grupos de la desnutrición (DA, DP, DC), antes de este hecho es importante hacer hincapié en las políticas públicas en educación y salud relacionados con la correcta nutrición.

PALABRAS CLAVE: Perfil nutricional, la obesidad y la malnutrición.

PERFIL NUTRICIONAL DE EDUCANDOS, NA FAIXA ETÁRIA DE 07 A 10 ANOS DE IDADE, DA REDE PÚBLICA MUNICIPAL DE ENSINO DA CIDADE DE MARABÁ-PA

RESUMO

Introdução: A merenda escolar é uma importante refeição de alunos de escolas públicas brasileiras, esse quadro é agravado em regiões mais pobres do país, como na região amazônica, pois em muitos casos é a única refeição diária do aluno; estudos que efetivam a avaliação de estado nutricional são de grande valor, pois revelam a importância de uma dieta balanceada a ser oferecida nas merendas das escolas públicas do Brasil. Objetivo: Avaliar o perfil nutricional de estudantes de 7-10 anos, de escolas públicas municipais de Marabá. Material e Métodos: O estudo foi realizado com 2505 alunos de 13 escolas públicas municipais de Marabá, de 5 núcleos urbanos (Morada Nova-MN, São Feliz-SF, Nova Marabá-NM, Marabá Pioneira-MP, Cidade Nova-CN). As crianças foram avaliadas através da classificação de Warterlow (1977). A análise dos dados foi feita através dos programas EPI Info 6.0 e Programa de Avaliação e Estado Nutricional em Pediatría (PED, 2000). Resultados e Discussão: O perfil nutricional a ser estabelecido foi Grande Obeso-GO, Obeso-OB, Sobrepeso-SP, Eutrófico-EU, Desnutrido Atual-DA, Desnutrido Progresso-DP, Desnutrido Crônico-DC. Não foram detectados GO em MN, SF e MP, havendo incidência apenas de 0,24%-NM e 0,31%-CN. OB foram observados: 0,15%-MN; 0,12%-SF; 1,32%-NM; 0,47%-MP e 2,08%-CN. SP: 0,04%-MN; 0,28%-SF; 1,72%-NM, 0,44%-MP e 2%-CN. EU: foram encontrados 2,08%-MN; 1,8%-SF; 13,17%-NM; 4,55%-MP e 16,45%-CN. DA: 1%-MN; 1,32%-SF; 7,98%-NM; 4,11%-MP e 11,1%-CN. DP: 0,52%-MN; 0,84%-SF; 6,35%-NM; 2,48%-MP e 8,1%-CN. DC: 0,24%-MN; 0,4%-SF; 2,87%-NM; 1,92%-MP e 3,55%-CN. Conclusão: Os hábitos alimentares estão inadequados, observando um baixo consumo de alimentos de valor nutritivo e baixo consumo de verduras, frutas e legumes, sendo que estes hábitos devem ser alterados para não causar complicações futuras, visto que 52,2% dos alunos se encontram nos grupos de desnutrição (DA, DP, DC), perante este fato é importante ressaltar as políticas públicas educacionais e de saúde relacionadas com alimentação correta.

PALAVRAS-CHAVES: Perfil nutricional, Obesidade e Desnutrição.